

AMENDMENTS TO THE SPECIFICATION:

Please amend the five paragraphs beginning at page 9 line 7 as follows:

~~"Figure 1~~Fig. 3 illustrates schematically shows the architecture of a server 100. A processor 101, is connected, via a bus 102, to a memory 104, and a hard drive 106. The bus 102 also connects the processor to a display driver 108, which can drive a monitor connected to an output interface 110. An input/output controller 112, also connects to the bus 102 and allows a keyboard, mouse, etc. to be connected the processor 101 via ports 114. A network controller 116 is provided to connect the processor 101 to a network via an output port 118. The processor 101 is further connected to an IP port 120, which provides access to the Internet. The server 100, together with network adapters, provides the necessary processing circuitry to operate a network.

~~Figure 2~~Fig. 4 illustrates shows an example of a ~~processing a computing device~~ that could be connected to a network. In the example shown, the computing device ~~2~~device 200 is a portable PC running the LINUX operating system. However, in other embodiments the portable PC may be any other form of computing device, and may be portable PC's running MicrosoftTM WindowsTM 2000, AppleTM iBooksTM, PDA's, telephones, or any other form of computing device. Such a computing device may be suitable for providing the mobile nodes discussed herein.

The structure of the computing ~~deviee 2~~device 200 is similar to that of the server ~~100~~. A processor 201 is connected, via a bus 202, to a memory 204, and a hard drive 206. The bus 202 also connects the processor to a display driver 208, which drives a display mounted on the computing device ~~via connection 210~~.

input/output controller 212, is also connected to the bus 202 and drives a keyboard 220 and a trackpad 222 via a connection 214 and allow a user to make inputs thereto. A network card, in this case wireless network PCMCIA card 216, is provided to allow the processor 201 to make a network connection to a network via an aerial 218 which in this case is external to the computing device 2.

The present invention will be described in relation to mobile computing devices, or mobile nodes 2 which move between wireless networks. It will be appreciated that in its broadest aspects the invention could be applied to wired networks, and a combination of wired and wireless networks. An example arrangement for two such networks is shown in Figure 3Fig. 5. Figure 3Fig. 5 shows two wireless networks 4, 8 each controlled by a server 100h, 100f. Each server 100h, 100f has the features of the server 100 shown in Figure 1, and like parts are labelledlabeled with like numbers with a suffix designating the particular server. Each server is connected to a router 102f, 102h which generates the surrounding wireless network and may be referred to as a mobility agent. The mobility agent may function as either a home or foreign agent.

In this embodiment, the wireless networks- a home network 4 and a foreign network FH- both utiliseutilize WIFI (or IEEE 802.11) protocol. The skilled person will fully understand this protocol, but they are directed to read the IEEE standard 802.11 for further information. The skilled person will appreciate that there are a plurality of different IEEE 802.11 standards, each of which may be applicable to this invention. Further there are other wireless network standards as will be explained hereinafter which may also be applicable. Figure 3Fig. 5 further shows a remote data source, in this case provided by a server 12, and a representation of the Internet I. Using known TCP/IP protocols, it is possible for each of the servers 100h, 100f to

communicate with each other and with the server 12 over the Internet using the IP ports 120h, 120f of the servers 100h, 100f. Of course, other transport protocols are known and equally applicable to this invention.”

Please amend the three paragraph beginning on page 11 at line 25 as follows:

In this embodiment, the server 100fserver 100h of the foreign network 8 is provided with a data transfer controller 104controller 105 (or data transfer controller means), which may be a software application running on thea processor 101f101 within server 100h. The data transfer controller means may also be provided by hardware such as an integrated circuit, or as firmware within a device. The data transfer controller 104 is105 is arranged to perform a comparison between the network address that originated a request for data and the network address of the requested data, and to initiate data transfer procedures dependant on the result of that comparison as described herein.”

In possibly the simplest embodiment of the present invention if the data transfer controller 104controller 105 determines that the network address from which the computing device 2 is requesting data is the same network to which the computing device is currently connected then the data transfer controller 104controller 105 forces the computing device to drop its network connection to the home network. At roughly the same time as the network connection to the home network is broken, then a network connection is made to the foreign network so that it appears to the user that there has always been a network connection present; this network connection to the foreign network is made without the use of the care of address as was previously the case.”

The data transfer controller 104controller 105 may be provided by a SIP (Session

Initiation Protocol) server. The SIP server may be arranged to send a signal to the computing device 2 that the use of the care of address is about to be terminated for one or more of the network connections and/or sub connections. The signal may incorporate a new IP address for the computing device to use whilst it is within the foreign network 8 for the portions of the connection for which the care of address is no longer being used.

Please amend the four paragraphs beginning on page 14 line 15 as follows:

"The data transfer controller ~~104~~controller 105 may also be arranged to consider 714 the security implications of transferring the, or each, network connection and/or sub connection 16,18 to the foreign network 8. It may be determined that it would be an unacceptable security risk to have the extra network connection directly on the foreign network 8 and as such the or each network connection and or sub connection 16,18 may be maintained to the home network 4.

Further, the data transfer controller ~~104~~controller 105 may be arranged 718 to give a user of the computing device 2 the option as to whether he/she wishes to have ~~the or the, or each~~ network connection and /or sub-connection transferred to the foreign network 8. If the data transfer controller 105 determines that there are no reasons to maintain the current network connection, a new IP address is assigned 722 and the connection is transferred to the foreign network.

If the data transfer controller ~~104~~controller 105 determines that for any of the reasons discussed above that the or each network connection and /or sub connection 16,18 should be maintained 708,712,716,720 to the home network 4 then the care of address is maintained and data to the computing device 2 continues to be routed via the home agent 6. Further, if reverse

~~tunnelling~~tunneling is being used, as described in relation to Figure 2, data from the computing device 2 continues to be routed via the home agent 6.

Figure 8 shows a network in which the data transfer controller 104~~controller~~ 105 has determined that the or each network connection and/or sub connection 16,18 should be moved from the home 4 to the foreign 8 network. New network connections 20,22 are shown from the computing device 2 to the foreign agent 10. It will be appreciated that because, in this embodiment, the link to the home agent 6 is only dropped if the data being requested from within the foreign network the new network connections 20,22 do not extend outside the foreign network 8. If data is required from outside the foreign network 8 then the routing through the home agent 6 is maintained and/or re-established."